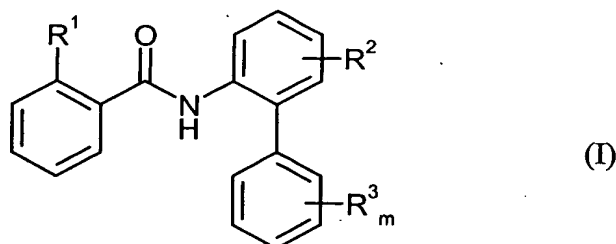


Patent claims

1. Microbicidal compositions, characterized in that they comprise at least one biphenylbenzamide derivative of the formula (I)



in which

R^1 represents methyl, trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

R^3 represents halogen, cyano, nitro, C_1 - C_6 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkylsulphonyl, C_2 - C_6 -alkenyl, C_3 - C_6 -cycloalkyl, or represents C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy, C_1 - C_6 -haloalkylthio or C_1 - C_6 -haloalkylsulphonyl having in each case 1 to 13 halogen atoms,

m represents 1, 2, 3, 4 or 5, where the radicals R^3 may be identical or different if m represents 2, 3, 4 or 5,

for controlling phytopathogenic pathogens from the classes of the Chytridiomycetes, Zygomycetes, Hemiascomycetes, Plectomycetes, Pyrenomycetes, Laboulbeniomycetes, Loculoascomycetes, Basidiomycetes and Deuteromycetes, and also harmful microorganisms in the protection of materials, such as Pseudomonadaceae, Rhizobiaceae, Enterobacteriaceae, Corynebacteriaceae and Streptomycetaceae.

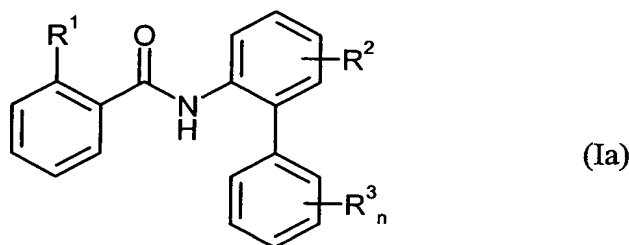
2. Compositions according to Claim 1, characterized in that they comprise at least one biphenylbenzamide derivative of the formula (I), in which

R^1 represents trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

- 5 R^3 represents halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_2 - C_4 -alkenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, or represents C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -haloalkylthio having in each case 1 to 9 halogen atoms,
- m represents 1, 2, 3, where the radicals R^3 may be identical or different if m represents 2 or 3.
- 10 3. Compositions according to Claim 1, characterized in that they comprise at least one biphenylbenzamide derivative of the formula (I), in which
- R^1 represents trifluoromethyl or iodine,
- R^2 represents hydrogen,
- R^3 represents fluorine, chlorine, bromine, iodine, methyl, ethyl, n-, i-propyl, n-, i-, s-, t-butyl, methoxy, ethoxy, methylthio, ethylthio, or represents C_1 - C_2 -haloalkyl, C_1 - C_2 -haloalkoxy or C_1 - C_2 -haloalkylthio having in each case 1 to 5 halogen atoms,
- 15 m represents 1, 2, where the radicals R^3 may be identical or different if m represents 2.
- 20 4. Compositions according to Claim 1, characterized in that they comprise at least one biphenylbenzamide derivative of the formula (I), in which
- R^1 represents trifluoromethyl or iodine,
- R^2 represents hydrogen,
- 25 R^3 represents fluorine, chlorine, bromine, methyl, methoxy, methylthio, trifluoromethyl, trifluoromethoxy or trifluoromethylthio,
- m represents 1, 2, where the radicals R^3 may be identical or different if m represents 2.
- 30 5. Compositions according to one or more of Claims 1 to 4 for controlling *Xanthomonas* species, such as, for example, *Xanthomonas campestris* pv.

- 5 oryzae; *Pseudomonas* species, such as, for example, *Pseudomonas syringae* pv. *lachrymans*; *Erwinia* species, such as, for example, *Erwinia amylovora*; *Erysiphe* species, such as, for example, *Erysiphe graminis*; *Sphaerotheca* species, such as, for example, *Sphaerotheca fuliginea*; *Podosphaera* species, such as, for example, *Podosphaera leucotricha*; *Venturia* species, such as, for example, *Venturia inaequalis*; *Pyrenophora* species, such as, for example, *Pyrenophora teres* or *P. graminea* (conidia form: *Drechslera*, syn: *Helminthosporium*); *Cochliobolus* species, such as, for example, *Cochliobolus sativus* (conidia form: *Drechslera*, syn: *Helminthosporium*);
- 10 *Uromyces* species, such as, for example, *Uromyces appendiculatus*; *Puccinia* species, such as, for example, *Puccinia recondita*; *Tilletia* species, such as, for example, *Tilletia caries*; *Ustilago* species, such as, for example, *Ustilago nuda* or *Ustilago avenae*; *Pellicularia* species, such as, for example, *Pellicularia sasakii*; *Pyricularia* species, such as, for example, *Pyricularia oryzae*;
- 15 *Fusarium* species, such as, for example, *Fusarium culmorum*; *Septoria* species, such as, for example, *Septoria nodorum*; *Leptosphaeria* species, such as, for example, *Leptosphaeria nodorum*; *Cercospora* species, such as, for example, *Cercospora canescens*; *Alternaria* species, such as, for example, *Alternaria brassicae*; *Pseudocercospora* species, such as, for example,
- 20 *Pseudocercospora herpotrichoides*.
- 25 6. Method for controlling unwanted microorganisms as set forth in Claim 1, characterized in that biphenylbenzamide derivatives of the formula (I) according to Claim 1 are applied to the microorganisms and/or their habitat.
7. Process for preparing microbicidal compositions, characterized in that biphenylbenzamide derivatives of the formula (I) according to Claim 1 are mixed with extenders and/or surfactants.
- 30 8. Biphenylbenzamide derivatives of the formula (Ia)



in which

R^1 represents methyl, trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

5 R^3 represents halogen, cyano, nitro, C_1 - C_6 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkylsulphonyl, C_2 - C_6 -alkenyl, C_3 - C_6 -cycloalkyl, or represents C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy, C_1 - C_6 -haloalkylthio or C_1 - C_6 -haloalkylsulphonyl having in each case 1 to 13 halogen atoms,

10 n represents 2, 3, 4, or 5, where the radicals R^3 may be identical or different.

9. Biphenylbenzamide derivatives of the formula (Ia) according to Claim 8 in which

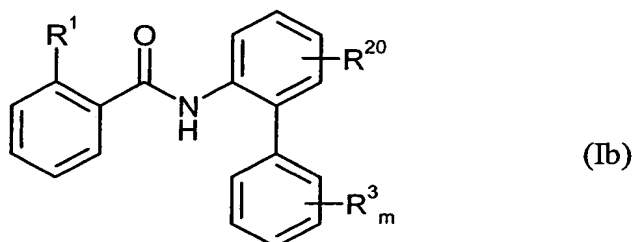
15 R^1 represents trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

R^3 represents halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_2 - C_4 -alkenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, or represents C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -haloalkylthio having in each case 1 to 9 halogen atoms,

20 n represents 2, 3, where the radicals R^3 may be identical or different.

10. Biphenylbenzamide derivatives of the formula (Ib)



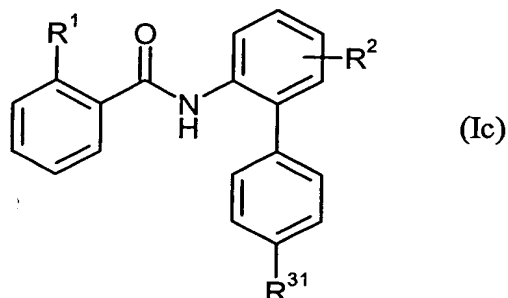
in which

- 5 R^1 represents methyl, trifluoromethyl, chlorine, bromine or iodine,
 R^{20} represents fluorine,
 R^3 represents halogen, cyano, nitro, C_1 - C_6 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkylsulphonyl, C_2 - C_6 -alkenyl, C_3 - C_6 -cycloalkyl, or represents C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy, C_1 - C_6 -haloalkylthio or C_1 - C_6 -haloalkylsulphonyl having in each case 1 to 13 halogen atoms,
 10 m represents 1, 2, 3, 4 or 5, where the radicals R^3 may be identical or different if m represents 2, 3, 4 or 5.

11. Biphenylbenzamide derivatives of the formula (Ib) according to Claim 10, in which

- 15 R^1 represents trifluoromethyl, chlorine, bromine or iodine,
 R^{20} represents fluorine,
 R^3 represents halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_2 - C_4 -alkenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, or represents C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -haloalkylthio having in each case 1 to 9 halogen atoms,
 20 m represents 1, 2, 3, where the radicals R^3 may be identical or different if m represents 2 or 3.

12. Biphenylbenzamide derivatives of the formula (Ic)



in which

R^1 represents methyl, trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

R^{31} , R^{32} and R^{33} independently of one another represent halogen, cyano, nitro, C_1 - C_6 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkylsulphonyl, C_2 - C_6 -alkenyl, C_3 - C_6 -cycloalkyl, or represent C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy, C_1 - C_6 -haloalkylthio or C_1 - C_6 -haloalkylsulphonyl having in each case 1 to 13 halogen atoms,

with the proviso that R^{31} and R^{33} each do not represent fluorine if R^1 represents trifluoromethyl and R^2 represents hydrogen.

13. Biphenylbenzamide derivatives of the formula (Ic) according to Claim 12 in which

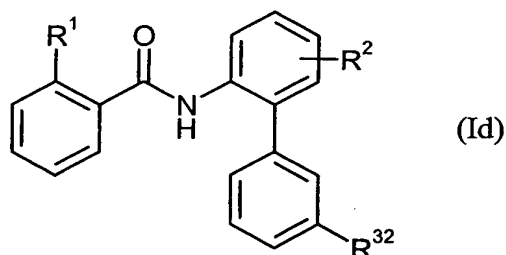
R^1 represents trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

R^{31} , R^{32} and R^{33} independently of one another represent halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_2 - C_4 -alkenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, or represent C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -haloalkylthio having in each case 1 to 9 halogen atoms,

with the proviso that R^{31} and R^{33} each do not represent fluorine if R^1 represents trifluoromethyl and R^2 represents hydrogen.

14. Biphenylbenzamide derivatives of the formula (Id)



in which

R^1 represents methyl, trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

R^{31} , R^{32} and R^{33} independently of one another represent halogen, cyano, nitro, C_1 - C_6 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkylsulphonyl, C_2 - C_6 -alkenyl, C_3 - C_6 -cycloalkyl, or represent C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy, C_1 - C_6 -haloalkylthio or C_1 - C_6 -haloalkylsulphonyl having in each case 1 to 13 halogen atoms,

with the proviso that R^{31} and R^{33} each do not represent fluorine if R^1 represents trifluoromethyl and R^2 represents hydrogen.

15. Biphenylbenzamide derivatives of the formula (Id) according to Claim 14, in which

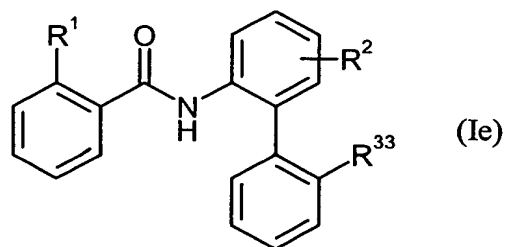
R^1 represents trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

R^{31} , R^{32} and R^{33} independently of one another represent halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_2 - C_4 -alkenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, or represent C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -haloalkylthio having in each case 1 to 9 halogen atoms,

with the proviso that R^{31} and R^{33} each do not represent fluorine if R^1 represents trifluoromethyl and R^2 represents hydrogen.

- 5 16. Biphenylbenzamide derivatives of the formula (Ie)



in which

R^1 represents methyl, trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

- 10 R^{31} , R^{32} and R^{33} independently of one another represent halogen, cyano, nitro, C_1 - C_6 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkylsulphonyl, C_2 - C_6 -alkenyl, C_3 - C_6 -cycloalkyl, or represent C_1 - C_6 -haloalkyl, C_1 - C_6 -haloalkoxy, C_1 - C_6 -haloalkylthio or C_1 - C_6 -haloalkylsulphonyl having in each case 1 to 13 halogen atoms,

15

with the proviso that R^{31} and R^{33} each do not represent fluorine if R^1 represents trifluoromethyl and R^2 represents hydrogen.

- 20 17. Biphenylbenzamide derivatives of the formula (Ie) according to Claim 16, in which

R^1 represents trifluoromethyl, chlorine, bromine or iodine,

R^2 represents hydrogen or fluorine,

- 25 R^{31} , R^{32} and R^{33} independently of one another represent halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio, C_2 - C_4 -alkenyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, or represent C_1 - C_4 -haloalkyl, C_1 - C_4 -halo-

alkoxy or C₁-C₄-haloalkylthio having in each case 1 to 9 halogen atoms,

with the proviso that R³¹ and R³³ each do not represent fluorine if R¹ represents trifluoromethyl and R² represents hydrogen.

- 5
18. Compositions for controlling unwanted microorganisms, characterized in that they comprise at least one biphenylbenzamide derivative of the formulae (Ia) according to Claim 8, (Ib) according to Claim 10, (Ic) according to Claim 12, 10 (Id) according to Claim 14 and/or (Ie) according to Claim 16, in addition to extenders and/or surfactants.
- 15
19. Use of biphenylbenzamide derivatives of the formulae (Ia) according to Claim 8, (Ib) according to Claim 10, (Ic) according to Claim 12, (Id) according to Claim 14 and/or (Ie) according to Claim 16 for controlling unwanted microorganisms.
- 20
20. Method for controlling unwanted microorganisms, characterized in that biphenylbenzamide derivatives of the formulae (Ia) according to Claim 8, (Ib) according to Claim 10, (Ic) according to Claim 12, (Id) according to Claim 14 and/or (Ie) according to Claim 16 are applied to the microorganisms and/or their habitat.
- 25
21. Process for preparing compositions for controlling unwanted microorganisms, characterized in that biphenylbenzamide derivatives of the formulae (Ia) according to Claim 8, (Ib) according to Claim 10, (Ic) according to Claim 12, (Id) according to Claim 14, and/or (Ie) according to Claim 16 are mixed with extenders and/or surfactants.